



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095

(603) 271-3406 FAX (603) 271-7894



Ms. Joyce Fulweiler
Town of Northfield
21 Summer Street
Northfield, NH 03276

June 24, 2002
Letter of Deficiency
DAM #180.02

RE: Knowles Pond Dam, Northfield

Dear Ms. Fulweiler:

The Department of Environmental Services, Dam Bureau (DES) consistently strives to enhance the safety of dams in New Hampshire through its dam safety program. One of the many instruments that plays a part in reaching this goal is our inspection program. DES is forwarding this correspondence to you to advise you that in accordance with RSA 482:12 and Env-Wr 502.02, an inspection of the subject dam was conducted on October 24, 2001. During this visual inspection and/or file review, the following deficiencies were observed:

1. The CMP culvert at the far left end of the dam was corroded beyond repair. It was evident that the dam had overtopped in the past in this area due to insufficient discharge capacity and clogging of the outlet with beaver debris;
2. There was an area of active seepage noted at the toe of the dam, approximately 100 feet to the left of the raw water intake station;
3. The crest and downstream embankment of the dam were uneven. There were areas of settlement at the right end of the dam along the upstream face and crest;
4. The location of the old water mains and the gate valve operators was unknown; and
5. There is no operation and maintenance (O&M) plan on file for the dam.

DES believes that the above deficiencies can be corrected by performing the following items by the indicated schedule:

August 30, 2002:

1. Submit a plan for removing the corroded CMP culvert at the far left end of the dam and replacing this outlet with a water level control structure that will pass the routed 100 year storm flow with one foot of freeboard remaining on the dam;
2. Prepare and submit to the DES a written O&M plan. The plan should describe the control of impoundment levels, monitoring and maintenance procedures, and identify emergency contact personnel;

November 15, 2002:

3. Regrade the crest and embankments of the dam to create an even embankment with consistent 2.5:1 slopes or greater on the downstream embankment;
4. Install a measuring weir in the area of active seepage noted at the toe of the dam, approximately 100 feet to the left of the raw water intake station. Maintain a log of scheduled readings to monitor this seepage. For assistance with the weir design please contact this office; and
5. Locate the old water mains and assess their operability.

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DES is requesting that you complete and submit the attached "Intent to Complete Repairs" form, within 30 days of receipt of this letter, that will provide for correction of the identified deficiencies by the date(s) indicated above. If you believe changes to the items of work or dates are necessary, please make the changes directly on the form and provide a brief explanation. We have enclosed a self addressed stamped envelope for you to return this form.

Our intent in sending you this correspondence is to make you aware of items that DES believes warrant your attention to insure the continued safe operation of your dam. It is our hope that, through the submittal of the attached form and a commitment to keeping a well-maintained dam, you will voluntarily comply with the requested items of work. If we do not receive the intent form or a similarly adequate written reply, we will assume that you are in agreement with our findings and recommendations and DES will carry out follow-up inspections accordingly.

☛ If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-3406, or write to the Water Division at the address listed on the top of the previous page.

Sincerely,

COPY
Grace E. Levergood, P.E.
Dam Safety Engineer

Attachments Guideline for an O&M plan, DB13

cc: Gretchen Rule

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